GOOD ROADS

ESSENTIALS OF GOOD ROADS

Rules Outlined for Construction of Stone Thoroughfares—Drainage Is Important.

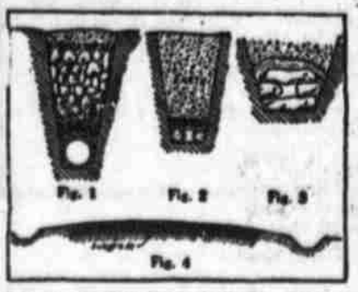
The essential requirements of good stone road construction may be condensed into the following rules:

1. Cut the high places down to a grade not exceeding 1 to 20; fill up lots or low places so as to have a minimum grade of 1 to 200.

2. Construct subdrains to carry away all seepage water; also make enough cross-drains to dispose of surface-water. Fig. 1 shows a subdrain of drain-tile covered with stone. Fig. 2 shows a subdrain made of logs, and Fig. 3 shows one made of field stone.

3. Make the subgrade firm and solid and give it the same curvature as the surface of the finished road.

4. Spread the bottom course of stone evenly, then roll and add a little



Subdrains and Cross Section of Road.

fine material for a binder, and continue the rolling until the stones cease to sink and creep in front of the roller.

5. Spread the second course and roll it with the addition of binder and water until the whole surface is hard and smooth, carefully filling with stone any depressions that may appear; then finish the whole with a course of three-quarter-inch stone and screenings. This must be soaked with water and rolled until the surface is hard and unyielding. Always be careful to commence the rolling at the sides and gradually work toward the center; by so doing the crown of the road will be preserved. If this work is well and thoroughly done the result will be a road that is smooth, hard and convenient for travel at all seasons of the year. Fig. 4 shows a cross-section of a macadam road, with layers of stone compacted in place.

For a farming community the width of macadam need not be greater than 10 or 12 feet. The width of stone surface should be sufficient to take care of all the travel on the road; but on the other hand it should not be so great as to require unnecessary expense in the construction or maintenance of the road.

When water has to be conveyed from one side of a road to the other it should be taken under the road by means of a culvert. A stone culvert is, of course, the best, but a vitrified tile pipe or a corrugated metal culvert may be used.

Lastly, give the road a good coat of suitable road oil to prevent dust and retard much damage to automobiles.

PROBLEM OF GOOD HIGHWAYS

Becoming One of Increasing Importance Because of Changes in Methods of Travel.

The road problem of the country is becoming one of ever-increasing importance, largely because of the changes in methods of travel which enable the city man to reach farther and farther into the country district. He does this first from a business or economic standpoint, and, second, from a pleasure-seeking standpoint. In an exactly similar manner, the farmer is getting fully aroused to the importance of better and better roads. They enable him to get to the city markets with his produce, whether that produce may be something requiring frequent trips, such as milk to a creamery, garden truck to market, or staple products to be hauled in their proper season. The better the roads, the cheaper he can haul his produce and the quicker he can do so, resulting in a saving of time, and the better choice he has of market conditions.

ESSENTIAL POINTS OF ROADS

Concrete Highways Reduce Pull, Increase the Load and Shorten Time of Delivery.

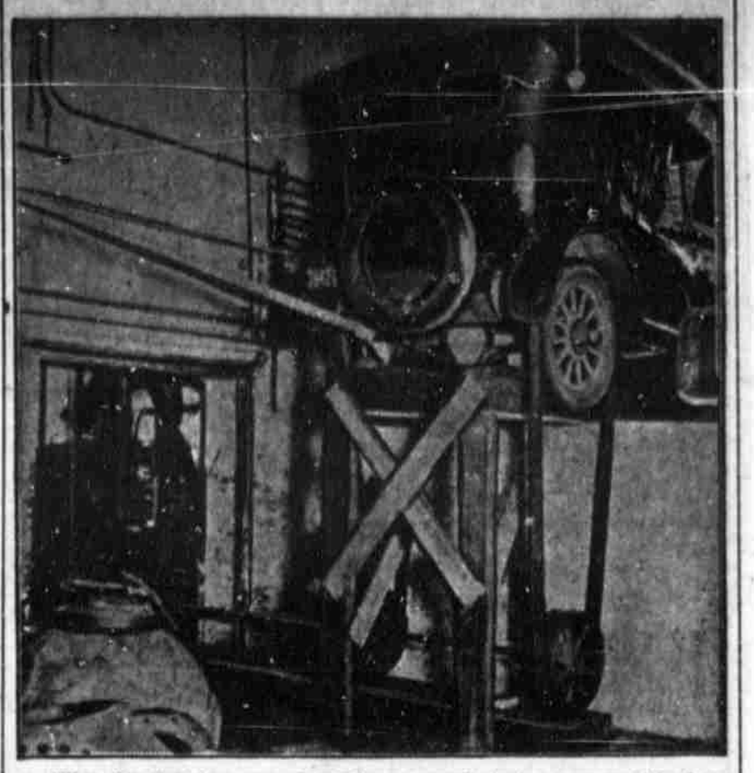
Concrete roads reduce the pull, increase the load and shorten the time—three essential points in modern road construction. With the quality of permanence added, the price paid becomes an investment instead of a loss.

BEST FOR MARKETING CROPS

Farmers Enabled to Haul Produce When Prices Are Highest If Highways Are Improved.

Good roads give a wider choice of time for marketing crops. If roads were kept in condition to permit travel and hauling at all times and in all kinds of weather, farmers would not have to rush their produce to market in seasons of good roads, but could haul it when prices were highest and when their crops did not demand attention

AUTOMOBILE SUPPLIES CHICAGO FACTORY WITH CURRENT FOR LIGHTING AND POWER



When the electric power of a Chicago manufacturing concern fails there will be no let up in the work as a result of a twelve-day experiment recently completed. George Davis, president of the company, set his automobile up on a platform, substituted pulleys on the rear axle shafts for the wheels and connected these pulleys to the factory power shaft. But the belts slipped and the auto wheels and tires were replaced. The car then ran a 220-volt generator 24 hours a day for 12 days, supplying the factory with current for light and power without any curtailment in the plant's output.

CARE OF BRAKES PREVENTS WEAR

Equalization and Proper Attention of Car's Machinery Are Explained.

NEGLECT OF CONTROL RODS

Clevises and Other Parts Are Not Provided With Any Means of Lubrication—Become Quite Noisy and Rattlesome.

The automobile owner is hardly to be blamed because he neglects the brake and control linkage on his car. It is all beneath the chassis, and it is certainly not arranged in such a way he can give it any marked attention. The clevises, and other parts of the points of the control rods are not provided with any means of lubrication, so that there seems to be little or nothing that the owner can do to take care of this part of the car.

Yet it is the brake and control-rods which eventually become the most noisy and rattlesome parts of the car. The little yoke connections with which the little ends of the rods are held together, become full of grit and are naturally bound to wear.

The connections through which the brakes are operated are simple and easy to follow. The pedal or lever is pivoted and connected with a set of rods and linkage arranged in such a way as to transmit the motion of the foot or hand is reduced and hence more powerful leverage to the brake mechanism.

Brake Adjustment.

In adjusting brakes some precautions must be kept in mind. In the case of the foot-brake, which is generally the external or contracting type, the bands bear on the exterior of the drums in securing the braking effect. There is generally an adjustment on the exterior part of the brake itself where the adjustment can be made without any danger of changing the throw of the linkage. This is very important, because if the throw or centers of the links are changed in their relationship they will be affected by the motion of the springs.

Perhaps you have noticed in some cars that if you watch the brake-pedal, it will move in or out as the car springs are deflected. The reason for this is that the rod which connects the brake linkage with the brake operating units, or, in other words, the last link in the chain of rods is centered so that the upward and downward motion of the chassis centers about such a point in relation to the pivot point of the rod that it becomes relatively longer or shorter and consequently moves the brake mechanism.

There are a great many manufacturers who are not putting equalizers on their cars and in these makes it is very essential to see that the brakes are adjusted uniformly.

How to Test Brakes.

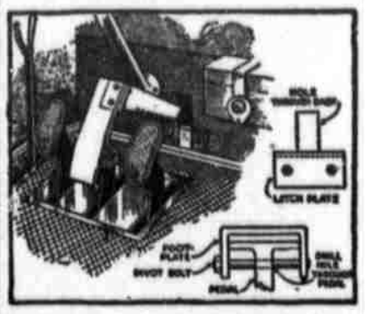
An easy way to test the brakes is to drive at about ten miles an hour while some one is watching the car. Apply the brake slightly and allow the observer to note if one wheel was locked before the other. If so, tighten the adjustment on the last wheel to lock and try it again. The test can be made on any kind of a road where the surface beneath each wheel is the same. A flat piece of asphalt makes a very good place to hold such a test.

SHEET STEEL PLATE HOLDS SPEED PEDAL

Handy Device When Driving Car at Moderate Rate.

Saw-Tooth Edge Engages Lip, Ratchet-Fashion, Regardless of Wear on Lining of Band—Wearisome Task Is Avoided.

In using a car with planetary transmission, it was found wearisome to keep the low-speed pedal down by foot pressure when driving uphill or traveling through sand or mud. The pedal was therefore equipped with a piece of ¼-in. sheet steel, with ears or flanges on both sides, by means of which it was pivoted on a small pin fitted through a hole drilled in the pedal just below the pad. A long piece of ¼-in. sheet steel, with a number of



By Means of a Toothed Plate the Low-Speed Pedal of an Automobile Is Held Down Without Pressure From the Driver's Foot.

teeth at the end which engage a steel lip screwed to the car dash, was fitted to the back of this member. The saw-tooth edge engaged the lip, ratchet-fashion, regardless of the wear on the lining of the band which the low-speed pedal tightens around the drum in the transmission.

To engage the teeth, the driver pushes the pedal forward until the car is on low speed, and then, with an upward movement of the knee, he causes the teeth to engage. To release the pedal, the pressure is applied on the portion of the plate just below the pivot, so that the teeth rise and disengage. When driving under ordinary conditions, the driver's foot prevents the teeth from dropping to the level of the lip, and if he wishes to travel on low speed for a few minutes, he presses the pedal forward in the usual way; but whenever he finds it necessary to travel for a considerable distance on low speed, the teeth are allowed to fall, thus engaging the lip.—Popular Mechanics Magazine.

AUTOMOBILE HINTS

Men who wash their own cars will find a spray brush handy.

* * *

The wise owner will each year clean the exhaust system thoroughly.

* * *

Air leaks are a common cause of misfiring, though they are often overlooked.

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No good tire of standard make will be cut by any standard rim if properly used.

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The choking devices now supplied with most good cars make starting easy even in the coldest weather.

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There is more wear reported on the side walls of the right tires, due to the increasing use of the left-side drive.

GOOD STYLE IN SUMMER WRAPS

COATS and sweaters, for spring and summer wear, reveal a great variety in designs with very few freakish or ungraceful models among them. The standard of "style" is high; that is, in color and form the new outer garments are artistic and pleasing and there are models for all personalities. The sweaters and sweater coats preserve the characteristics of sports garments, but have taken on additional dignity by using elegant materials and adopting the required lines. This fits them to play more than one role, for street dress with a sports dress flavor is among the things that have arrived to spend the summer with us.

A great many cape-like wraps, and modifications of the cape, are displayed for summer wear. These are long and have big collars, as a rule, some of them to be correctly described as huge. A few have moderate collars of summer furs; squirrel being a favorite. The liking for long capacious wraps has survived the winter.

Even coats often emphasize the dominance of the cape by introducing the semblance of one in their composition An example of this appears in the wrap shown above with a shallow yoke at the top, supporting a short cape at the back that is merged into sleeves Parallel rows of stitching and very large buttons call attention to this set-on cape and large buttons on the sleeves ask that they be not overloaded. The coat has patch pockets at the front and reaches within six inches of the bottom of the skirt. It is provided with a muffler collar, for which there is plenty of need in the mountains and on the shore.

Handsome sweater coats of silk jersey or other silk weaves are displayed both in gay and in sedate colors. Even black is very smart this season in these coats and commends itself for wear with separate skirts on the street. The model shown in the picture is double-breasted and has employed angora cloth for a wide convertible collar and deep border at the bottom in which pockets are formed at each side. A girdle of the material ends in long silk tassels.

Ginghams Return With Summer

MORNING dresses or utility dresses or porch dresses, as they are variously called, made of ginghams, chambrays, percales and other cottons, have soared in price until they bring as much as wool or silk frocks did in pre war days. The high cost of labor, more than anything else, has brought them up to the point where there is a very great saving in making them at home, and in addition to the saving there are other good reasons why mothers and daughters should do this work for themselves. Ordinary needlework ought to be a part of every girl's training and cotton house dresses or school dresses offer chances for learning what it is certain most women will some day need to know.

For the aspiring flapper there are such pretty frocks of ginghams as those shown here, to lure her into learning how to use a needle. They could hardly be more simple, but they are neat and crisp looking and suggest all sorts of good times in summer weather. Such dresses are often made with gingham hats to match or hats of white organdy are provided for wear with them. And just lately adorable and frivolous sunbonnets have returned from a long exile, to take the place of summer sunshades.

The colorings in the plaid and checked ginghams are more than ever attractive this year. An indistinct plaid in the picture has a rather short skirt for the young person who likes this mode—a plain waist with round neck and three-quarter length sleeves A wide belt looks well and fits nicely, cut on the bias of the goods. For embellishment there are flat pearl buttons set on the waist and skirt and a round pique collar. The other dress is made with a plain skirt and a coat with diagonal opening at the front. Its edges are piped with white pique which also makes the shaped collar Pockets cut on the bias, flat pearl buttons and pipings of white give this frock a neat finish.

Julia Bottomley

The Newest Negligees.

Chinese suggestions are worked out effectively in many of the newest negligee garments. One model recently displayed appeared an exact replica of the costume of a Chinese lady It consisted of a plaited skirt and loose-fitting jacket of black satin, the latter embroidered in gull wings and greens.

DADDY'S EVENING FAIRY TALE

by Mary Graham Bonner

THE OSTRICH'S STORY.

"I have a story," said Olive Ostrich, "for all who care to hear it."

Olive Ostrich Grinned.

All the animals about said they would love to hear the story, so Olive Ostrich sat down in her yard in the sun, chewed a little and smiled her very foolish smile.

"Some children were talking and that is how I heard about it," she said, grinning in a silly way at all about her. "There were two little black shaggy dogs on a little harness and they were held by a leash by a little girl and were made to look like a team of horses."

Olive Ostrich grinned and then said, "But that wasn't the story I meant to tell you. I meant to remember this one. Of course I'm not very bright, and while I hear the children who come to the zoo talking I can't remember all I hear, or if I remember it I forget which is the thing that is important I meant to tell.

"Let me see. There was once a dog named Mugsy, a nice chow dog. What did he do that was famous? Something I'm quite sure, but now, come to think of it, I've forgotten it."

"Then," said one of the other animals, "if you can't think of it if you've forgotten it, that is you haven't thought of it yet?"

"Right, you are right, my dear friend," said Olive Ostrich. "Still I was just about to think of it when I found I had forgotten it. I meant to think of it and then couldn't.

"Let's see, perhaps this is it. I heard some children talking the other day of two cats who belonged in a children's hospital. The cats weren't ill—you understand that I hope."

"Don't worry about our understanding," said one of the other animals. "Try to remember what was the story you had to tell us."

"Dear me, I am very stupid. Very stupid."

"You were speaking of two cats who belonged in a children's hospital," suggested one of the other animals.

"Yes, yes, thanks for reminding me," said the ostrich. "My memory isn't usually as bad as this. I'm just feeling more stupid today than usual. In fact there is nothing wrong with my memory, oh no, I'm just plain stupid.

"Well, these two cats belonged to the matron of the hospital. She was devoted to them. She used to run the elevator up and down. The cats would never walk up or down the stairs. They would get in the elevator and sit there all curled up until time to go down—that is until she came and took them down, and if they wanted to go upstairs to another floor and she started to go down they would make little sounds to show what they meant. Wasn't that cunning? They didn't care to walk. They had been spoilt by the elevator in the building. Weren't they the lazy things though."

"Was that the story you meant to tell us?" the animals asked. "It is a cunning story."

"And it's quite true," said the ostrich, "but do you know that still isn't the story I've been meaning to tell you?"

"I don't know why I'm so stupid today. I'm not usually quite so stupid as this. Of course I am stupid, but not so terribly stupid. It's just that my brain is small, they say, very small. Ah, now I have it. Now I know what I was going to tell you. This is the most important thing I've heard the children say for a long time.

"They were looking at me and one of them said, 'Did you see in the parade the other day the horse who wore an ostrich plume at either side of his head for decorations? One was dyed green and the other red.'

All Curled Up.

"And the other children said they had seen it too. Well, that did flatter me, to think that the horse, of whom people think so much, had to be decorated for the parade with plumes from the ostrich, and that they went to the trouble of dyeing them beautiful shades too."

"Well," said the other animals, "it is nice to hear your real story at last."

What Johnny Really Did.

Teacher—"Johnny Jones, step forward. How many times have I told you not to whisper in school?"

Johnny—"Oover't."

Teacher—"My! Such grammar! James Hall, should Johnny have said 'Oover-t?'"

James—"No, ma'am. He should have said 'twice.'"—Boys' Magazine.